



Object Technology Resources

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I. Reading Materials

A. Book Bibliography

The books listed below provide both novice and expert object technology developers with insights on developing applications using object technology, and selecting and using an appropriate language and object-oriented methodology. Many of these books are on the “recommended” list for Taligent’s own software engineers.

For a comprehensive list of books that contain information on object technology, please see “OOP Book Listings.” *The Journal of Object-Oriented Programming*, Vol. 6, No. 3 (June 1993), p. 86. This article lists more than 325 books on object technology. This issue also contains an article entitled “Critic’s Choice.”

1. General Object Technology

Budd, Timothy. *Introduction to Object-Oriented Programming*. Reading, MA: Addison-Wesley, 1991. Budd takes a Smalltalk approach to describing object-oriented programming.

Harmon, Paul and David Taylor. *Objects in Action: Commercial Applications of Object-Oriented Technologies*. Reading, MA: Addison-Wesley, 1993.

Henderson-Sellers, Brian. *Book of Object-Oriented Knowledge*. Englewood Cliffs, NJ: Prentice Hall, 1992.

Lorenz, Mark. *OO Software Development: A Practical Guide*. Englewood Cliffs, NJ: Prentice Hall, 1993. Lorenz describes object-oriented software development from an IBM/Smalltalk viewpoint.

Taylor, David A. *Object-Oriented Information Systems: Planning and Implementation*. Reading, MA: Addison-Wesley, 1991.

Taylor, David A. *Object-Oriented Technology: A Manager’s Guide*. Reading, MA: Addison-Wesley, 1991. Introduction to object technology for business and technical managers.

2. Methodology

Berard, Ed. *A Comparison of Object-Oriented Development Methodologies*. Gaithersburg, MD: Berard Software Engineering, 1993. This publication discusses object-oriented methods and their appropriateness to development environments. (This paper is available directly from Berard Software Engineering.)

Booch, Grady. *Object-Oriented Analysis and Design With Applications*. Redwood City, CA: Benjamin/Cummings, 1994. Booch thoroughly covers the ins and outs of object-oriented design. If you read nothing else, read this book. This book is highly recommended to Taligent engineers.

Goldstein, Neal, and Jeff Alger. *Developing Object-Oriented Software for the Macintosh*. Reading, MA: Addison-Wesley, 1992. Another excellent perspective on object-oriented design. This book explores some of the common myths. Don't let the title fool you – it's not really that specific to the Macintosh. This book is highly recommended to Telligent engineers.

Meyer, Bertrand. *Object-Oriented Software Construction*. Englewood Cliffs, NJ: Prentice Hall, 1988. A guide for object-oriented designers (first part of the book only). This book is recommended to Telligent engineers.

Wirfs-Brock, Rebecca, et al. *Designing Object-Oriented Software*. Englewood Cliffs, NJ: Prentice Hall, 1990. A guide for object-oriented designers. This book is recommended to Telligent engineers.

3. Programming Languages

Cargill, Tom. *C++ Programming Style*. Reading, MA: Addison-Wesley, 1992. This book contains that rare and useful information: examples of bad code with analyses. It provides detailed guidance on issues such as abstraction, consistency, inheritance, virtual functions, operator overloading, wrappers and efficiency. This book is highly recommended to Telligent engineers.

Coplien, James O. *Advanced C++ Programming Styles and Idioms*. Reading, MA: Addison-Wesley, 1992. This book contains many useful techniques. However, it is hard to read, and some of the tricks are a little questionable or run counter to rules in other books. Murray's book (mentioned below) has few examples but is easier to read and the examples are cleaner. This book is recommended to Telligent engineers.

Ellis, Margaret, and Bjarne Stroustrup. *The Annotated C++ Reference Manual*. Reading, MA: Addison-Wesley, 1990. This book (known as "the ARM") has been supplanted by the current working paper for the draft ANSI C++ standard. This reference manual reflects the state of the language at the start of the standardization process a few years ago. Neither this book nor the working paper is light bedtime reading. However, it is essential to have one of them close at hand to make optimum use of C++. We recommend you read one of them completely. If you can get a copy of the working paper, that is preferable to using the ARM. This book recommended to Telligent engineers.

LaLonda, Wilf R., and John R. Pugh. *Inside Smalltalk I* and *Inside Smalltalk II*. Englewood Cliffs, NJ: Prentice Hall, 1991. These two books are the classic "Goldberg and Robson" Smalltalk books of the 1990s.

Lippman, Stanley. *The C++ Primer, 2nd ed.* Reading, MA: Addison-Wesley, 1991. A gentler tutorial for C++ than Stroustrup's *The C++ Programming Language, 2nd ed.*, although *The C++ Programming Language, 2nd ed.* is much better organized and more approachable. This book is recommended to Telligent engineers.

Meyers, Scott. *Effective C++*. Reading, MA: Addison-Wesley, 1992. Presents 50 specific rules for designing and writing with C++. This book is strongly recommended to Telligent engineers.

Murray, Robert B. *C++ Strategies and Tactics*. Reading, MA: Addison-Wesley, 1993. This book has many useful tips and techniques for using C++. This book is strongly recommended to Telligent engineers.

Prata, Stephen. *C++ Primer Plus: Teach Yourself Object-Oriented Programming*. Corte Madera, CA: Waite Group Press, 1991. This book is well organized and more approachable than Stroustrup's book and assumes you don't know C.

Stroustrup, Bjarne. *The C++ Programming Language, 2nd ed.* Reading, MA: Addison-Wesley, 1991. In addition to being the best introduction and reference to the language (with the exception of the ANSI draft specification), there are excellent chapters on object-oriented design and management of object-oriented projects. This book is full of experience from the man who has worked on more C++ projects than anyone else. This book is highly recommended to Telligent engineers.

Wilson, David A., Larry Rosenstein, and Dan Shafer. *C++ Programming with MacApp*. Reading, MA: Addison-Wesley, 1990. This book is an introduction to frameworks for object-oriented designers and programmers. This book is recommended to Telligent engineers.

Note: *The Journal of Object-Oriented Programming* includes columns on C++, Smalltalk, and Eiffel.

4. Reengineering

Hammer, Michael, and James Champy. *Reengineering the Corporation: A Manifesto for Business Revolution*. New York: HarperCollins Publishers, 1993.

B. Periodical and Newsletter Sources

The periodicals and newsletters listed below focus primarily or exclusively on object technology. Although this list is not exhaustive, it contains the major periodicals and newsletters which cover topical issues of interest to object-oriented developers. Note that most of these sources are highly technical and address issues confronting technical managers and software engineers who are engaged in object technology development projects.

1. Periodicals

The C++ Report

SIGS Publications Inc.
588 Broadway, Suite 604
New York, NY 10021
(212) 274-0640 voice
(212) 274-0646 fax

Communications of the ACM

The Association for Computing Machinery (ACM), Inc.
1515 Broadway
New York, NY 10036
(212) 869-7440 voice
(212) 869-0481 fax

Frameworks – The Journal for Software Development Using Object Technology

Software Frameworks Association (formerly MADA)
10062 Miller Avenue, Suite 202-B
Cupertino, CA 95014
(408) 253-2765 voice
(408) 253-2767 fax
frameworks@applelink.apple.com
info@frameworks.org

The Journal of Object-Oriented Programming

See SIGS Publications, Inc. above.

IEEE Software

10662 Los Vaqueros Circle
Los Alamitos, CA 90720
(714) 821-8380

Object Magazine

See SIGS Publications, Inc. above.

The Smalltalk Report

See SIGS Publications, Inc. above.

2. Newsletters

Distributed Computing Monitor

Patricia Seybold Group
148 State Street, Seventh Floor
Boston, MA 02109
(617) 742-5200

First Class

Object Management Group
Framingham Corporate Center
492 Old Connecticut Path
Framingham, MA 01710
(508) 820-4300

OO Strategies

Cutter Information Corp.
37 Broadway
Arlington, MA 02174-5539
(617) 648-8702 voice
(617) 648-1950 fax

Release 1.0

EDventure Holdings, Inc.
104 Fifth Avenue, 20th Floor
New York, NY 10011
(212) 924-8800 voice
(212) 924-0240 fax

C. Article Bibliography

Listed below are citations for articles in key areas of interest for business executives, technical managers, and software engineers interested in object technology. The citations have been grouped by topic, and are by no means an exhaustive listing of all articles available on a given subject. Please note that most of the articles are less than two years old.

1. Object Technology In Use

Babcok, Charles. "Object Lessons." *Computerworld*, Vol. 27, No. 18 (May 3, 1993), p. 58.

Ballou, Melinda-Carol. "Early Users Ride Object Wave." *Computerworld*, Vol. 27, No. 27 (July 5, 1993), p. 61. Object World San Francisco '93 and Object Management Group's survey of object technology users.

Bonar, Jeffrey. "Crown Jewels: the Value of Object-Oriented Technology in MIS Departments." *Hotline on Object-Oriented Technology*, Vol. 1, No. 12 (October 1990), p. 67.

Cook, Steve. "Object Technology in the United Kingdom." *First Class*, Vol. 2, No. 1 (April-May 1992), p. 10.

Davis, John, and Tom Morgan. "Object-Oriented Development at Brooklyn Union Gas." *IEEE Software*, Vol. 10, No. 1 (January 1993), p. 67. A detailed account of the specification and design of a very large object-oriented system and its implementation on a traditional, non-object-oriented mainframe platform.

Deyo, Nancy, and Joe Gillach. "Object Lessons." *CIO*, Vol. 6, No. 18 (September 15, 1993), p. 28.

Deyo, Nancy, Joe Gillach, and Keith Wescourt. *Lessons Learned from Early Adopters of Object Technology*. Cupertino, CA: Taligent, 1992. A summary of interviews with engineers, technology and business managers in fourteen companies who have extensive object technology experience and the lessons they learned.

Fichman, Robert, and Chris Kemerer. "Adoption of Software Engineering Process Innovations The Case of Object Orientation." *Sloan Management Review*, (Winter 1993). The authors argue that object technology is not likely to be quickly adopted by large in-house business information systems groups without significant changes in analysis and design, coding and testing, and data management. For another viewpoint, refer to the Lavoie, Baetjer, Tulloh, and Langlois article listed under "Object Marketplace."

Freedman, David. "The Objective Approach." *CIO*, (May 15, 1992), p. 70.

Inman, Boyd. "United Artists Embraces Object Technology." *Object Magazine*, Vol. 3, No. 2 (July-August 1993), p. 62.

Kindel, Sharon. "Smart Code." *Frameworks*, (April 13, 1993), p. 56.

Krivda, Cheryl. "Any Objections? OOP Gains a Stronghold in the Midrange Community." *MIDRANGE Systems*, Vol. 6, No. 10 (May 25, 1993), p. 35. The benefits of object-oriented programming are described in this article.

Pittman, Matthew. "Lessons Learned in Managing Object-Oriented Development." *IEEE Software*, Vol. 10, No. 1 (January 1993), p. 43.

Reeves, Cliff. "Why Objects? Why Now?" *Object Magazine*, Vol. 3, No. 4 (November-December 1993), p. 14.

Violino, Bob. "Citi's Surge" *Information Week*, No. 437 (August 9, 1993), p. 42. Citibank's client/server and OOP strategy.

Yamazaki, Seiichi. "Object-Oriented Design of Telecommunication Software." *IEEE Software*, Vol. 10, No. 1 (January 1993), p. 81. A description of NTT's efforts to determine how object technology will work on large, complex telecommunication systems and a presentation of an object-oriented design method developed for such systems.

2. Object Marketplace

"Some Early Instances Prototypes, Even of Object Markets." *Release 1.0*, Vol. 92, No. 7 (July 1992), p. 12.

Dyson, Esther. "Object Markets: Potential Developments in the Marketing of Programming Objects." *Release 1.0*, Vol. 92, No. 7 (July 1992), p. 1.

Lavoie, Don, Howare Baetjer, William Tulloh, and Richard N. Langlois. "Component Software: A Market Perspective on the Coming Revolution in Solutions Development." *Distributed Computing Monitor*, Vol. 8, No. 1 (January 1993), p. 1. This report is an excerpt from a study examining the underlying economic logic driving the transformation to a software components industry. It is a rebuttal to the Fichman and Kremer article listed under "Object Technology in Use."

3. Reuse

Goldberg, Adele. "Wishful Thinking." *Object Magazine*, Vol. 2, No. 6 (May-April 1993), p. 96.

Graham, Ian. "Interoperation: Reusing Existing Software Components and Packages." *Object Magazine*, Vol. 2, No. 6 (May-April 1993), p. 25.

Henderson-Sellers, B. "The Economics of Reusing Library Classes." *Journal of Object-Oriented Programming*, Vol. 6, No. 4 (July-August 1993), p. 43. This article is excellent, especially in helping to quantify or explain the mathematics of reuse. This article includes a bibliography.

Henderson-Sellers, B., and Y. R. Plant. "Adopting the Reuse Mindset Throughout the Lifecycle: When Should We Generalize Classes to Make Them Reuseable?" *Object Magazine*, Vol. 3, No. 4 (November-December 1993), p. 73. Reuse offers time and cost savings, but you must develop a specific reuse strategy to achieve these savings.

Horner, Ken. "More to Reuse Than Objects." *Software Magazine*, Vol. 13, No. 7 (May 1993), p. 6. Although short, this article makes excellent points on what is required for reuse.

Lorenz, Mark. "Real-World Reuse." *Journal of Object-Oriented Programming*, Vol. 6, No. 4 (November-December 1991), p. 43.

"Managing Reuse: Exposing the Hidden Agenda." *IEEE Software*, Vol. 10, No. 1 (January 1993), p. 46.

4. Frameworks

Nierstrasz, Oscar, Simon Gibbs, and Dennis Tsichritzis. "Component-Oriented Software Development." *Communications of the ACM*, Vol. 35, No. 9 (September 1992), p. 160. The authors provide insight into the problems that must be solved before component-oriented software development becomes a reality and propose developing application frameworks that abstract and encapsulate the knowledge in application domains. The idea of developing frameworks is made concrete using the domain of multimedia applications. This article includes an extensive bibliography.

Shelton, Robert E. "The Distributed Enterprise: The Logical Next Step in Distributed Object Computing is Shared, Reusable Business Models, Not Just Objects." *Distributed Computing Monitor*, Vol. 8, No. 10 (October 1993), p. 3. The report examines pivotal efforts from a range of motivations where object-orientation is being applied to both the business and technology infrastructure to build the next generation business distributed enterprise.

Waldo, Jim. "Generic Containers." *UNIX Review*, Vol. 11, No. 8 (August 1993), p. 73. The advantages and disadvantages of generic containers are examined.

Wong, William. "Object-Oriented Program Construction: Interconnecting Components is as Important as Fabricating Them." *Dr. Dobb's Journal*, Vol. 17, No. 10 (October 1992), p. 36.

5. Methodology and Modeling

"Object-Oriented and Conventional Analysis and Design Methodologies: Comparison and Critique." *Computer*, Vol 25, No. 10 (October 1992), p. 22. This article includes a bibliography.

Beck, Kent. "CRC: Objects Made Easy." *Object Magazine*, Vol. 3, No. 4 (November-December 1993), p. 42. By focusing on CRC (Class, Responsibilities, and Collaborators) early in design, systems can make good use of objects.

Chandrasekaran, B., Todd R. Johnson, and Jack W. Smith. "Task-Structure Analysis for Knowledge Modeling." *Communications of the ACM*, Vol. 35, No. 9 (September 1992), p. 124. Addressing the recent trend emphasizing knowledge modeling rather than implementation issues, the authors discuss the concept of task structure and how it can facilitate knowledge modeling. This article includes an extensive bibliography.

Curtis, Bill, Marc I. Keller, and Jim Over. "Process Modeling." *Communications of the ACM*, Vol. 35, No. 9 (September 1992), p. 75. This article is an overview of the current work in modeling the entire software development process. The authors bring out the issues in process modeling and outline the current status and future directions in research. This article includes an extensive bibliography.

Krasner, Herb, Jim Terrel, Adam Linehan, Paul Arnold, and William H. Ett. "Lesson Learned from a Software Process Modeling System." *Communications of the ACM*, Vol. 35, No. 9 (September 1992), p. 91. The authors describe a prototype tool, SPMS, for supporting a software development process model and discuss experiences in using the tool for process model development. This article includes an extensive bibliography.

Korson, Timothy D., and Vijay K. Valshnavi. "Managing Emerging Software Technologies: A Technology Transfer Framework." *Communications of the ACM*, Vol 35, No. 9 (September 1992), p. 101. Focusing on the management of emerging software technologies (such as object-oriented), this article presents an approach to transferring technology. This article includes a bibliography.

Lee, Michael M. "Object-Oriented Analysis in Large-Scale Projects." *Object Magazine*, Vol. 3, No. 4 (November-December 1993), p. 45. The Shlaer/Mellor OOA method was used on five separate projects in medium to large, real-time systems, in organizations that had little or no prior experience in formal analysis methods.

Monarchi, David E., and Gretch I. Puhr. "A Research Topology for Object-Oriented Analysis and Design." *Communications of the ACM*, Vol. 35, No. 9 (September 1992), p. 35. This article offers a discussion about research in developing techniques and representations for object-oriented analysis and design, using an approach developed by the authors for comparing the evaluating the current research. The approach helps in understanding and interpreting the large number of techniques and representations being proposed, as well as in identifying gaps in current research. This article includes an extensive bibliography.

Navathe, Shamkant B. "Evolution of Data Modeling for Databases." *Communications of the ACM*, Vol. 35, No. 9 (September 1992), p. 112. The author provides an overview of how data models have evolved with an outline of some of the research being conducted in the area and how it relates to object-oriented modeling.

Nerson, Jean-Marc. "Applying Object-Oriented Analysis and Design." *Communications of the ACM*, Vol. 35, No. 9 (September 1992), p. 63. This article presents a methodology that is based on a set of notations and is illustrated through a case study. This article includes an extensive bibliography.

Rasmus, Daniel W. "Taming the AI Madness with Object Methods." *Object Magazine*, Vol. 3, No. 4 (November-December 1993), p. 58. Object models, with their standardized methods and syntax, will enable artificial intelligence to flourish, even though artificial intelligence is generally under utilized.

Rosenberg, Doug. "Using the Object Modeling Technique with Objectory for Client/Server Development," *Object Magazine*, Vol. 3, No. 4 (November-December 1993), p. 54. Rumbaugh's Object Modeling Technique (OMT), when applied to client-server development, yields a richer notation and greater expressive power that is beneficial for object modeling, even if an RDB is used for implementation.

Rubin, Kenneth S., and Adele Goldberg. "Object Behavior Analysis." *Communications of the ACM*, Vol. 35, No. 9 (September 1992), p. 48. Object Behavior Analysis takes a behavioral approach in identifying objects, object relationships, and system dynamics. This article includes an extensive bibliography.

Scheer, August-Wilhelm, and Alexander Hars. "Extending Data Modeling to Cover the Whole Enterprise." *Communications of the ACM*, Vol. 35, No. 9 (September 1992), p. 166. The authors report their experiences in developing data models that cover entire enterprises. This article includes an extensive bibliography.

Short, Keith, and John Dodd. "Information Engineering with Objects." *Object Magazine*, Vol. 3, No. 4 (November-December 1993), p. 61. The authors present a comprehensive system development methodology that includes a set of object-oriented techniques that are consistent with the goals and objectives of the wider information engineering framework.

Singer, Gilbert. "An Eclectic Approach to Developing an OO Methodology." *Object Magazine*, Vol. 3, No. 4 (November-December 1993), p. 36. The various object-oriented modeling techniques are more similar than different, despite their noticeably different graphic representations. A sampling of different techniques is discussed.

Wirfs-Brock, Rebecca. "Stereotyping: A Technique for Characterizing Objects and Their Interactions." *Object Magazine*, Vol. 3, No. 4 (November-December 1993), p. 50. This article explores how behavioral stereotypes are a useful starting point for thinking about objects and examines our object vocabulary for describing characteristics.

Note: *The Journal of Object-Oriented Programming* and *Object Magazine* include columns on methodology and design.

6. Object-Oriented Metrics

Taylor, David. "Software Metrics for Object Technology." *Object Magazine*, Vol. 2, No. 6 (March-April 1993), p. 22.

7. Training

"JOOP Programming Education & Training Guide." *Journal of Object-Oriented Programming*, Vol. 6, No. 2 (March-April 1993), p. 51. This article presents a comprehensive guide of over 131 companies worldwide that offer object technology-related training and education services.

Ambler, Scott. "Getting 'Old Structured Dogs' to Learn New Tricks: Training Business Managers in Object-Oriented Technology." *Computing Canada*, Vol. 18, No. 24 (November 23, 1992), p. 47.

Wu, C. Thomas. "Three Stage Incremental Approach in Teaching OOP." *Journal of Object-Oriented Programming*, Vol. 6, No. 4 (July-August 1993), p. 86.

Wu, C. Thomas. "Teaching OOP in Three Stages, Stage 3" *Journal of Object-Oriented Programming*, Vol. 7, No. 5 (September 1993), p. 62.

Note: *The Journal of Object-Oriented Programming* and *Object Magazine* include columns on education and training.

8. Consultants

“The Journal of Object-Oriented Programming Guide to OO Consultants.” *Journal of Object-Oriented Programming*, Vol. 6, No. 5 (September 1993), p 54. This article presents a comprehensive list of over 150 consultants that offer object technology-related services.

Berard, Ed. “Selecting and Using Consultants for Object-Oriented Technology.” *Journal of Object-Oriented Programming*, Vol. 6, No. 5 (September 1993), p 48.

Lorenz, Mark. “A Return on Your Consulting Investment - How to Hire an Outside Consultant.” *Journal of Object-Oriented Programming*, Vol. 6, No. 5 (September 1993), p 43.

9. Reengineering

Broadbent, Marianne, and Peter Weill. “Improving Business and Information Strategy Alignment: Learning From the Banking Industry.” *IBM Systems Journal*, Vol. 32, No. 1 (March 1993), p. 162.

Davidson, William. “Beyond Reengineering: The Three Phases of Business Transformation.” *IBM Systems Journal*, Vol. 32, No. 1 (March 1993), p. 65.

Pfrenzinger, Steven. “Reengineering Goals Shift Toward Analysis, Transition: Users Adjust Expectations as Suppliers Work on Next-Generation Capture Tools.” *Software Magazine*, Vol. 12, No. 14 (October 1992), p. 44.

Seybold, Patricia. “Business Process Design: The Next Breakthrough in Organization Effectiveness.” *Patricia Seybold's Office Computing Report*, Vol. 15, No. 9 (September 1992), p. 20.

10. Miscellaneous Topics

Guglielmi, Joe. “Renewing Innovation Through Object Technology.” *Object Magazine*, Vol. 2, No. 6 (March-April 1993), p. 12. Written by the Taligent CEO.

Lane, Alex. “Bring Your Own Tools.” *AI Expert*, Vol. 8, No. 9 (September 1993), p. 16. This is a good overview of SOM that includes a bibliography.

“OO DBMS.” *DBMS*, Vol. 6, No. 7 (June 15, 1993), p. 59. This article presents a high level overview of seventeen OO DBMS companies and their basic products.

Roy, Mark, and Alan Ewald. “Encapsulating Databases: Practical Uses of Object Technology to Improve the Value of Relational Data.” *Distributed Computing Monitor*, Vol. 8, No. 4 (April 1993), p. 1.

Note: *The Journal of Object-Oriented Programming* includes column on C++, Smalltalk, and Eiffel. *The Journal of Object-Oriented Programming* and *Object Magazine* include columns on ODBMS.

D. Other Publication Sources

The following sources provide conference proceedings, quantitative studies on worldwide object technology adoption patterns, and other information about object technology. While these publications can be expensive, they often provide unique insights unavailable elsewhere.

1. Miscellaneous Sources

Object Management Group (OMG)

Framingham Corporate Center
492 Old Connecticut Path
Framingham, MA 01710
(508) 820-4300

OMG publications include *Common Object Request Broker Architecture (CORBA) and Specification*, *Object Management Architecture Guide*, and a newsletter entitled *First Class*.

Ovum Reports

Rathbone Street
London W10 1Af England
44 071 255-2670 voice
44 071 255-1995 fax

Ovum produces numerous books and studies on object technology and the worldwide marketplace.

Patricia Seybold Group

148 State Street, Seventh Floor
Boston, MA 02109
(617) 742-5200

Patricia Seybold Group publishes a number of newsletters including *Distributed Computing Monitor* and sponsors conferences including Patricia Seybold's Object Technology Conference.

SIGS Publications, Inc.

588 Broadway, Suite 604
New York, NY 10012
(212) 274-0640 voice
(212) 274-0646 fax

SIGS publishes a variety of books including *The International OOP Directory*, periodicals, and conference proceedings.

2. Conference Proceedings

C++ World

Contact SIGS Publications for information.
588 Broadway, Suite 604
New York, NY 10012
(212) 274-9135 voice
(212) 274-0899 fax

ECOOP

Kaiserlauten, Germany

DFKI in cooperation with ACM

Contact The Association for Computing Machinery (ACM) for information.

1515 Broadway

New York, NY 10036

(212) 869-7440 voice

(212) 869-0481 fax

Object Expo

111 Speen Street

P.O. Box 9107

Framingham, MA 01701

(508) 879-6700 voice

(508) 872-8237 fax

Object World

Contact SIGS Publication, Inc. for information.

OOPSLA

Contact The Association for Computing Machinery (ACM) for information.

Patricia Seybold's Object Technology Conference

Patricia Seybold Group

148 State Street, Seventh Floor

Boston, MA 02109

(617) 742-5200

USENIX

USENIX Association

2560 Ninth Street, Suite 215

Berkeley, CA 94710

II. Training

1. Apple and IBM Training Organizations

Taligent's work with corporate developers adopting object technology has found that most companies significantly underestimate the time and expense required to properly train their software engineers in object techniques. Listed below are training organizations within both Apple and IBM that provide object technology training for developers.

Apple Computer, Inc.

Developer University Training Registrar
20525 Mariani Avenue, M/S 305-1TU
Cupertino, CA 95014
(408) 974-4897

AppleLink: DEVUNIV

Apple offers a variety of courses including object technology and MacApp development. AppleLink users can check AppleLink for on-line information.

IBM, Inc.

Skill Dynamics, an IBM Company
65 East 55th Street
New York, NY 10022
(212) 230-5056
1(800) IBM.TEACH
JoeGreen@VNET.IBM.COM

Skill Dynamics offers a variety of object technology courses including a structured series of object technology classes.

2. Other Training Organizations

In addition to Apple and IBM's training organizations, there are hundreds of large and small training companies that provide excellent training in object technology concepts and development techniques. For a comprehensive guide to over 131 companies worldwide that offer object technology-related training and education services, please see "JOOP Programming Education & Training Guide." *The Journal of Object-Oriented Programming*, Vol. 6, No. 2 (March-April 1993), p. 51.

Your local university or community college may also offer object technology courses. Ask them for their course catalog.

III. Consultants and Systems Integrators

Many consulting and system integration firms focus exclusively on object technology transfer, providing a variety of assistance from object-oriented analysis (OOA) and object-oriented design (OOD) to management consulting to help developers adopt the technology within their environment.

The companies listed below have been recommended to Taligent for their work in helping corporate developers adopt object technology. For a comprehensive list of over 150 consultants that offer object technology-related services, please see "The Journal of Object-Oriented Programming Guide to OO Consultants." *Journal of Object-Oriented Programming*, Vol. 6, No. 5 (September 1993), p. 54.

For two related articles on selecting and using consultants, please refer to:

Berard, Ed. "Selecting and Using Consultants for Object-Oriented Technology." *Journal of Object-Oriented Programming*, Vol. 6, No. 5 (September 1993), p. 48.

Lorenz, Mark. "A Return on Your Consulting Investment - How to Hire an Outside Consultant." *Journal of Object-Oriented Programming*, Vol. 6, No. 5 (September 1993), p. 43.

1. Consultants

Atelier Research, Westport, CT

Mr. Adrian Bowles
(203) 221-1199

Bowles offers management consulting and education to clients adopting new and emerging technologies.

Bear River Associates, Berkeley, CA

Mr. Tony Meadows
(510) 644-0555 voice
(510) 644-9778 fax

Bear River helps with transition to Macintosh Programming.

Berard Software Engineering, Inc., Gaithersburg, MD

Mr. Jim Youlio
(301) 417-9884 voice
(301) 417-0021 fax

Berard Software Engineering provides OOA/OOD, software engineering, domain analysis, testing, enterprise modeling, project management, and management overview.

Mr. Neil Goldstein, Palo Alto, CA

(415) 327-4565
Goldstein offers consulting on OOA/OOD.

IBM Consulting, Southbury, CT

Mr. Tom Love
(203) 262-3453

Mr. Love is responsible for IBM's object technology consulting practice, providing object solutions to the Fortune 500 by offering a full suite of consulting services from management consulting through functional implementation.

Knowledge Systems Corporation (KSC), Cary, NC

Mr. Reed Philips
(919) 481-4000 voice
(919) 460-9044 fax

KSC is an IBM Business Partner offering advanced programming, training, and consulting in Smalltalk, OS/2, VWIN, and ObjectWorks; analysis and design, and contract development.

Open Engineering, Inc., San Francisco, CA

Mr. Robert Shelton
(415)989-9050 voice
(415)989-9055 fax

Open Engineering provides object-oriented business engineering, technology selection, project mentoring, OOA/OOD, and open systems/distributed computing DBMS.

ParcPlace Systems, Sunnyvale, CA

1(800) 759-PARC

ParcPlace consults in ObjectWorks/Smalltalk, ObjectBuilder, object-oriented methods, and in managing object-oriented development. Consulting can be provided in any of several forms, including project assessment and planning, mentoring, design and code reviews, and goal-directed workshops.

Syrinx Corp., New York, NY

Ms. Marie Lenzi
(212) 229-0320 voice
(212) 807-9111 fax

Syrinx specializes in introducing and implementing object technology, migration strategies, transition management, OOA/OOD, implementation languages, mentoring, and application development.

2. Systems Integrators

Andersen Consulting, Chicago, IL

Mr. Alan Wolpert
(212) 708-8242

Andersen Consulting has extensive experience developing commercial business applications using object technology.

EDS, Plano, TX

Mr. Mike Bauer
(214) 605-4039 voice
(214) 605-4506 fax

EDS provides technology planning using an object-oriented planning approach and helps clients develop object-oriented strategies.

SHL SystemHouse, New York, NY

Mr. Ralph Frankel

(212) 303-5500

SHL SystemHouse is a specialist in providing object-oriented solutions to clients with extensive experience with large projects and moving object technology in the mainstream.

IV. Associations and Conferences

1. Associations

Associations exist to provide information to their membership as well as to help influence standards and technology directions. Associations whose members and boards of directors include corporate users rather than just vendors are a good source of up to date information on trends and developments with object technology.

The Association for Computing Machinery (ACM), Inc.

1515 Broadway
New York, NY 10036
(212) 869-7440 voice
(212) 869-0481 fax

Software Frameworks Association (formerly MADA)

10062 Miller Avenue, Suite 202-B
Cupertino, CA 95014
(408) 253-2765 voice
(408) 253-2767 fax
frameworks@applelink.apple.com
info @frameworks.org

Object Management Group (OMG)

Framingham Corporate Center
492 Old Connecticut Path
Framingham, MA 01710
(508) 820-4300

USENIX

USENIX Association
2560 Ninth Street, Suite 215
Berkeley, CA 94710

2. Conferences

Associations also sponsor many of the major object technology conferences, so membership often brings with it an opportunity to help select speakers or to participate on panel discussions. Conferences are not only an excellent source of information on current developments with object technology but also a unique opportunity for attendees to compare experiences with their peers. Companies have told Taligent that the most useful conferences are those where "real" users (rather than vendors) share their success stories and challenges in adopting and applying object technology within their environments.

C++ World

Contact SIGS Publications for information.
588 Broadway, Suite 604
New York, NY 10012
(212) 274-0640 voice
(212) 274-0646 fax

ECOOP

Kaiserlauten, Germany

DFKI in cooperation with ACM

Contact The Association for Computing Machinery (ACM) for information.

MADACON

Contact Software Frameworks Association (formerly MADA) for information.

Object Expo

111 Speen Street

P.O. Box 9107

Framingham, MA 01701

(508) 879-6700 voice

(508) 872-8237 fax

Object World

Contact SIGS Publications for information.

OOPSLA

Contact The Association for Computing Machinery (ACM) for information.

Patricia Seybold's Object Technology Conference

Patricia Seybold Group

148 State Street, Seventh Floor

Boston, MA 02109

(617) 742-5200

USENIX

Contact USENIX Association for information.